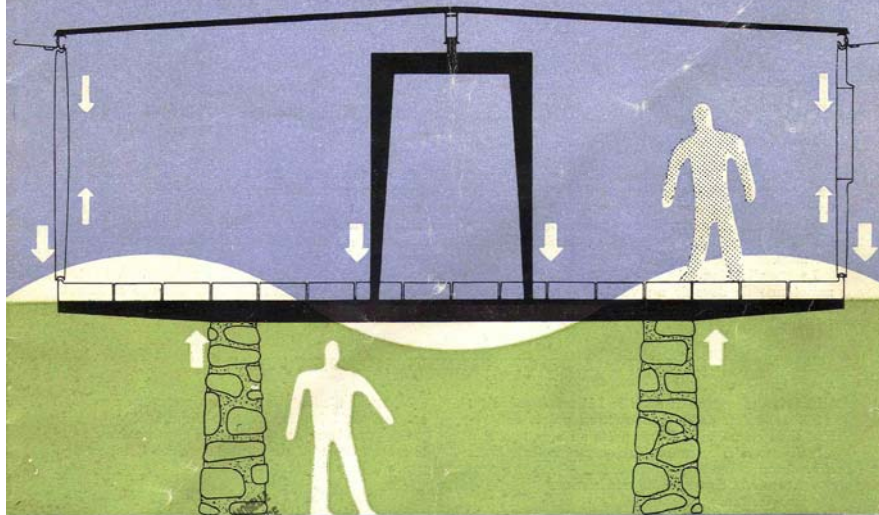


**MODES DE CONSTRUCTION
TYPES D'HABITATIONS
CRÉÉS PAR LES ATELIERS
JEAN PROUVÉ**



ARCHIVES DÉPARTEMENTALES DE MEURTHE ET MOSELLE
1, Rue de la Mairie - 54000 NANCY - FRANCE
Sous-Séclé 23 J. Archives JEAN PROUVÉ
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AGENT EXCLUSIF DE VENTE, 12, RUE NEWTON, PARIS-16°

The Innovative Lightweight
Buildings and Systems of
Jean Prouvé

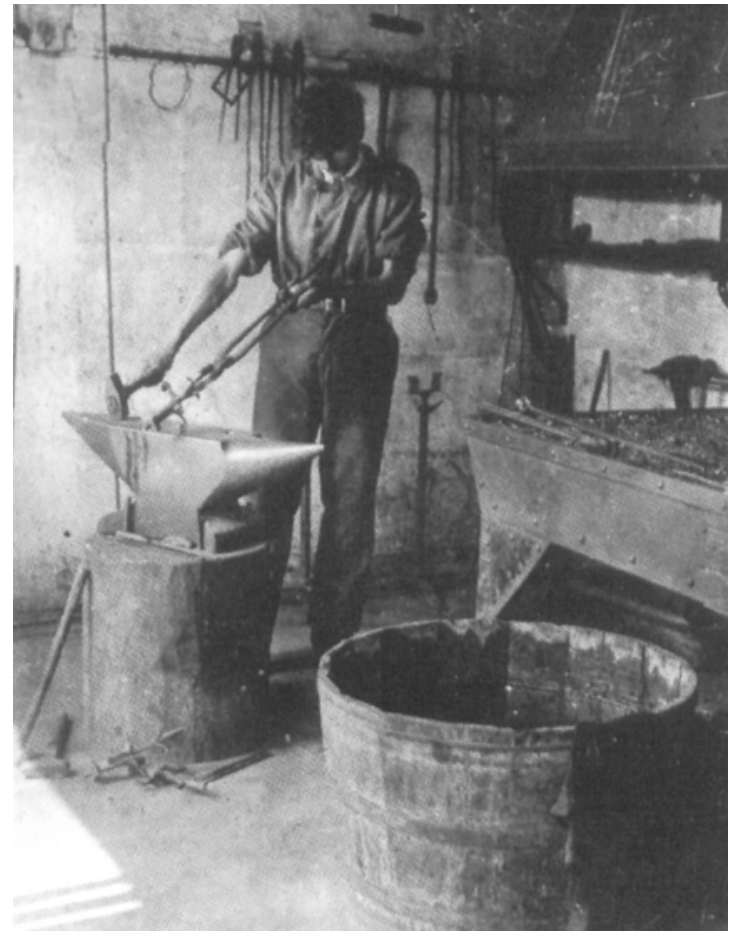
Advancements for Metal Buildings
Congress 08

Remo Pedreschi
University of Edinburgh

Jean Prouvé 1901-84

- Designer and manufacturer
- Innovator in materials and processes
- 'If aeroplanes were designed the same way as buildings they would not fly'
- 'Above all, one should not sketch utopian projects because evolution can only result from practical experience which speeds it on its way'
- One should design merely what can be executed but always in the most advanced way and without recourse to imitation'





Early work

Jean Prouvé

- 'It may well be that the present formula which consists of displaying a drawing and requesting a builder to follow it is the root of our present decay'
- Working sequence
 - An idea
 - A dialogue on the spot with associate by means of highly technical sketches
 - Prototype or model
 - Assess trial, test, correct and only then a plan is drawn

Attitude to Industry and professions

- Concerned about craft, 'An honest approach must lead to that osmosis of science, the mind and craft'.
- Saw industry as opportunity to solve housing projects.
- The separation of design disciplines and organisations has detrimental influence. - design in isolation from manufacture.
- 'If the architect is not integrated into the industry, industry will continue without him' Human factors must always be accounted for.
- Architects place reservations on design, 'I would have liked to but..'
- Architect or engineer? Why ask the question building is what matters.

Prouvé

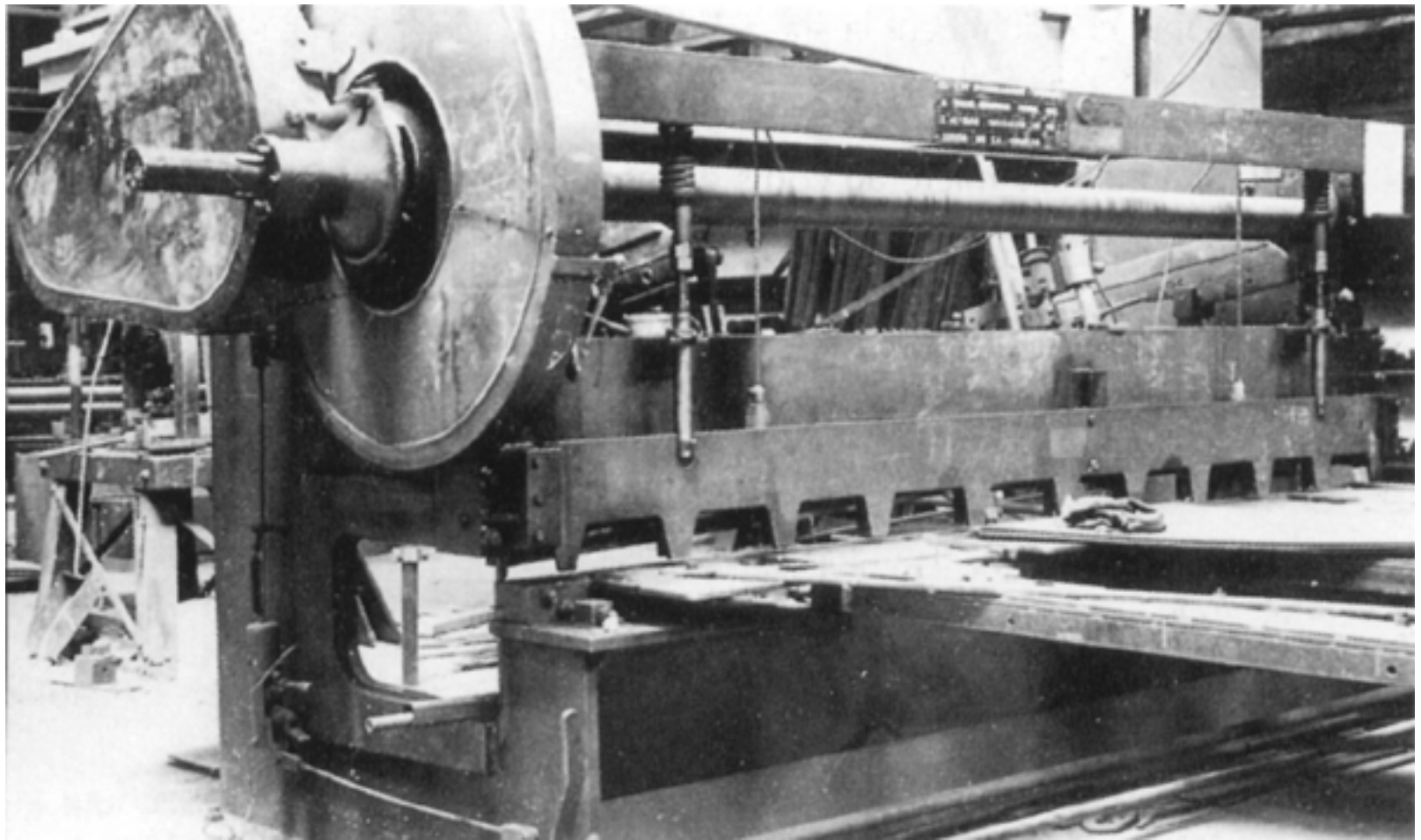
- 'I noticed two things, one of these was the intense interest by technicians in the purely technical aspects of my projects, regardless of their content. The other was the equally intense interest shown by architects and users who saw in my projects an opportunity to modernise solely for appearances sake'



1928

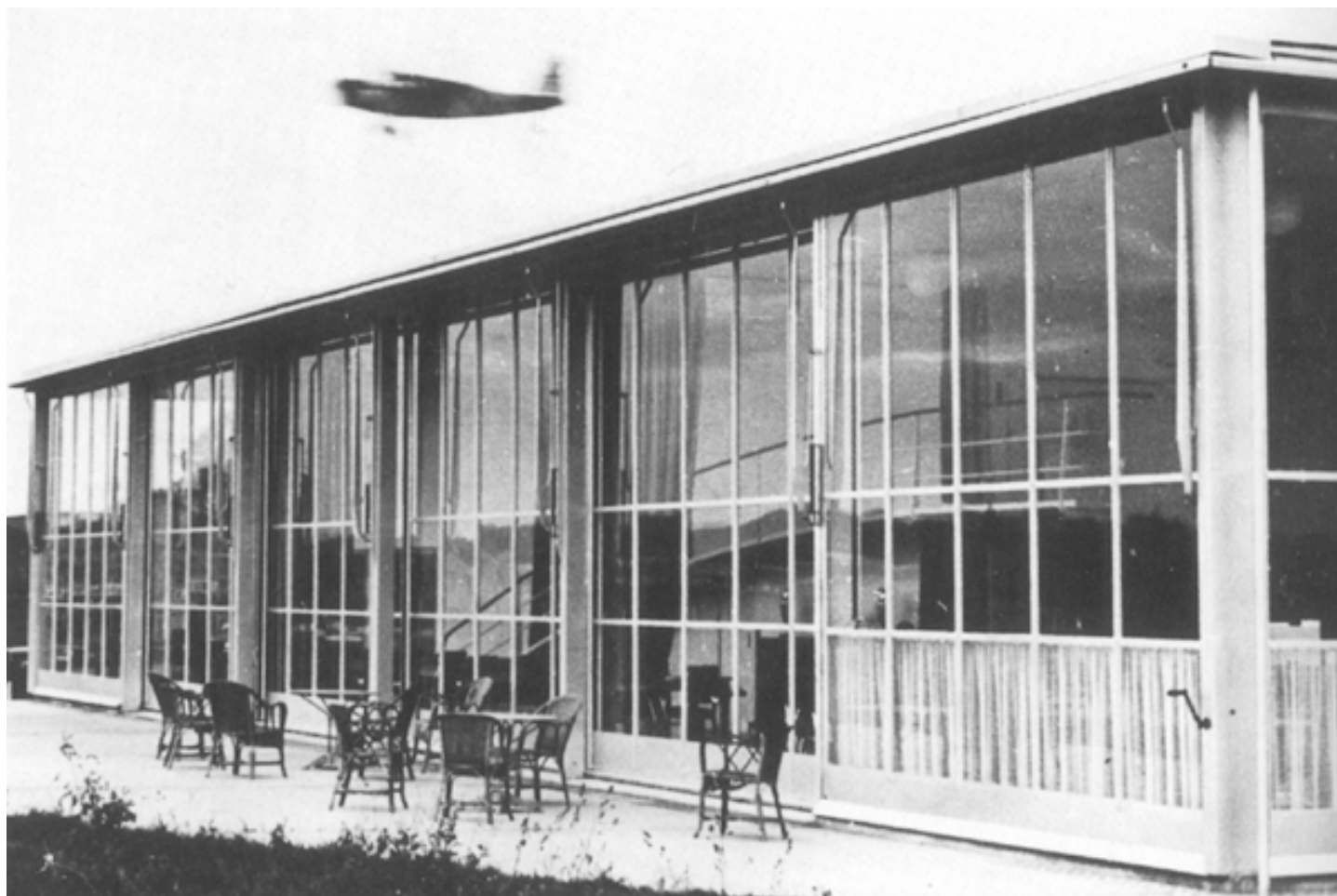


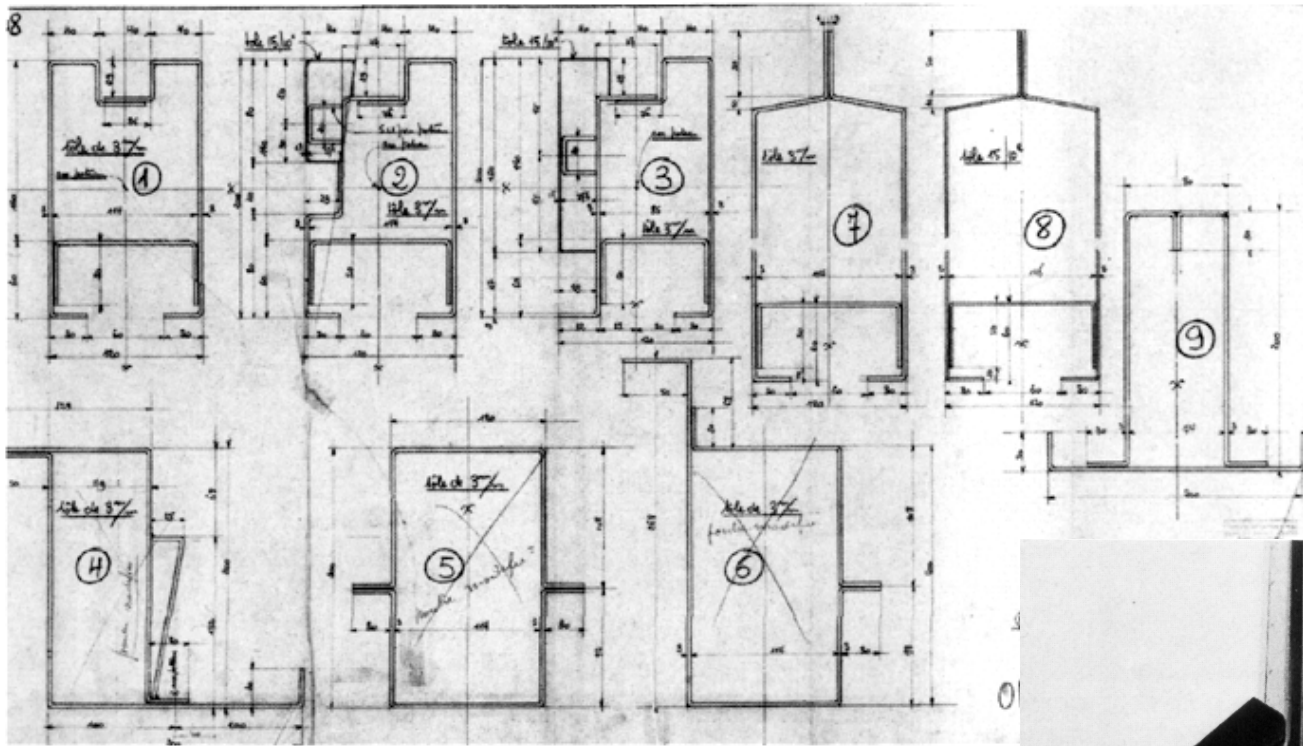
1928/29 L'Hôtel de l'Ermitage



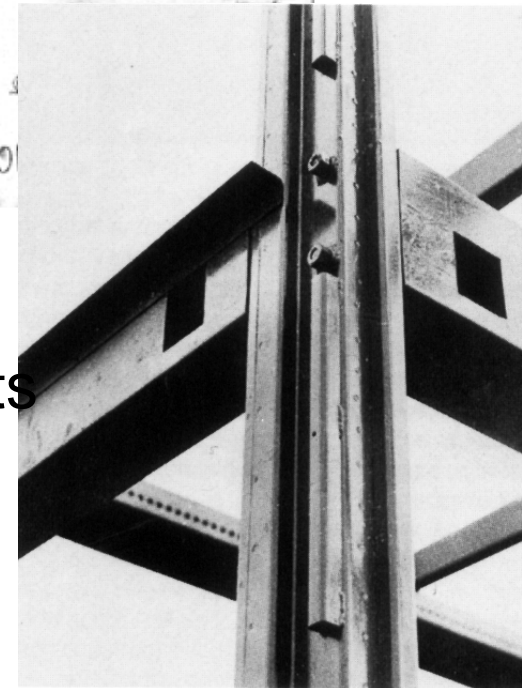
Roland Garros Aero Club

- 1936/37
- Flying club of Roland Garros at Buc, near Versailles
- Collaborated with Beaudouin and Lods
- Complete construction made in Prouvé workshops
- Prototype developed
- Structural frame made from folded sections of 4 mm thick steel sheet; including floors and ceilings
- Cladding made of folded steel
- Roof of folded sheet steel
- No standard components





Folded steel structural components





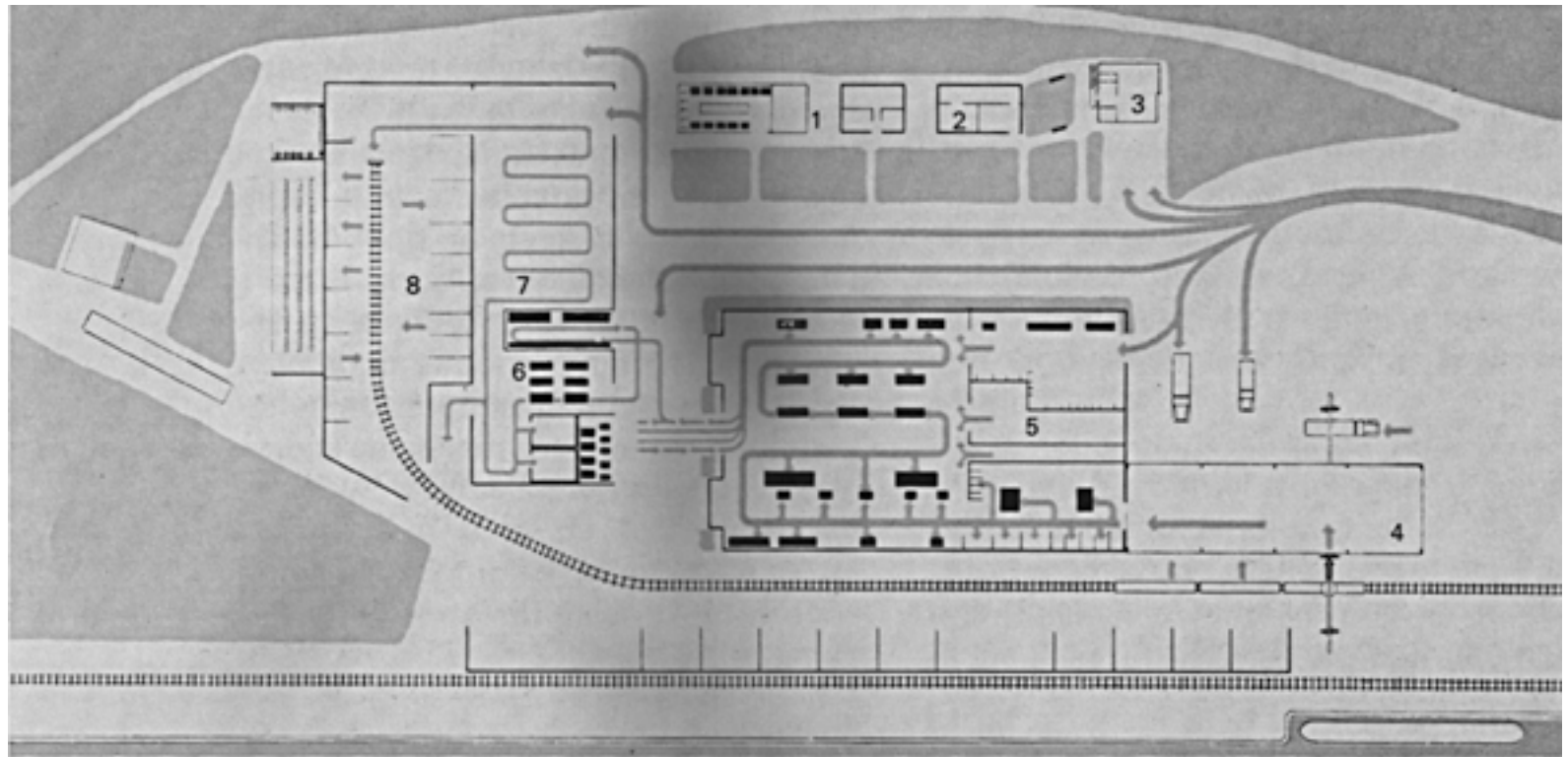
Folded steel panels

Q1xTm~ and a
TIFF (Uncompressed) compressor
and WebP (VP8) format.

Maxéville factory

- Factory opens in 1947
- Aluminium Francais provides capital for factory of 25000m2 for 200 workers.
- A pilot for working methods, the architects, workmen, foremen were all associates.
- Conditions
 - Guarantee minimum wage based on collective agreement
 - Share in team profit
 - All share in cost saving
- Prodigious activity, experimental buildings, furniture, facades.
- Unfortunately the new men did not understand the spirit of our new creation. They had discovered an architectural style which made commercial sense and would lead to mass production of elements adaptable for use in any kind of architecture.'
- 1954 Jean Prouvé forced out from factory, moves to Paris

Maxeville layout

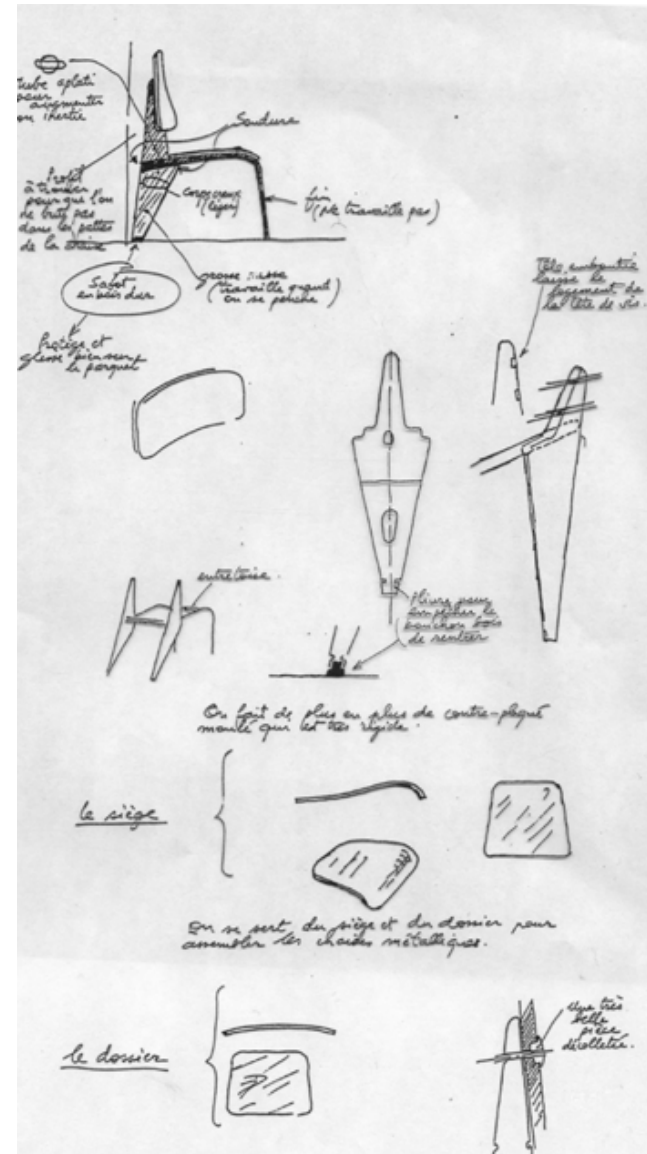


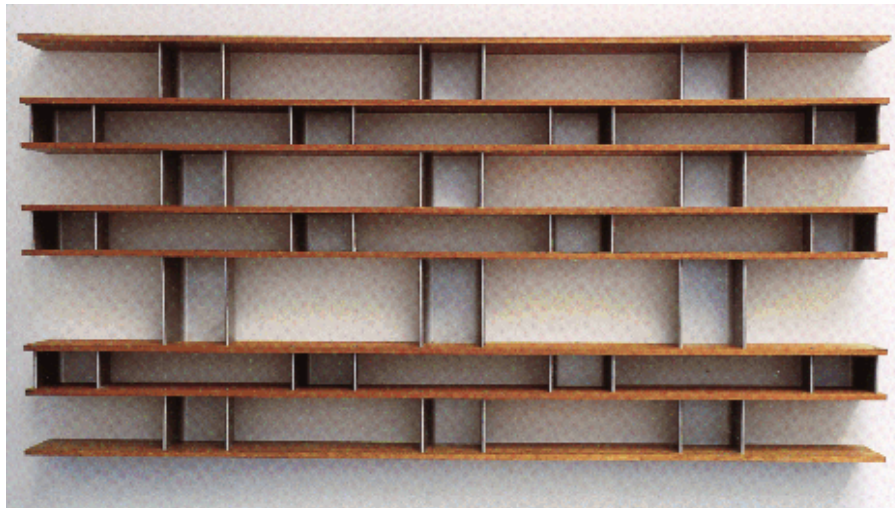
4 storage
5
production
6 finishing
7 furniture
8 storage

3 Prouve office
2 architects
1 offices

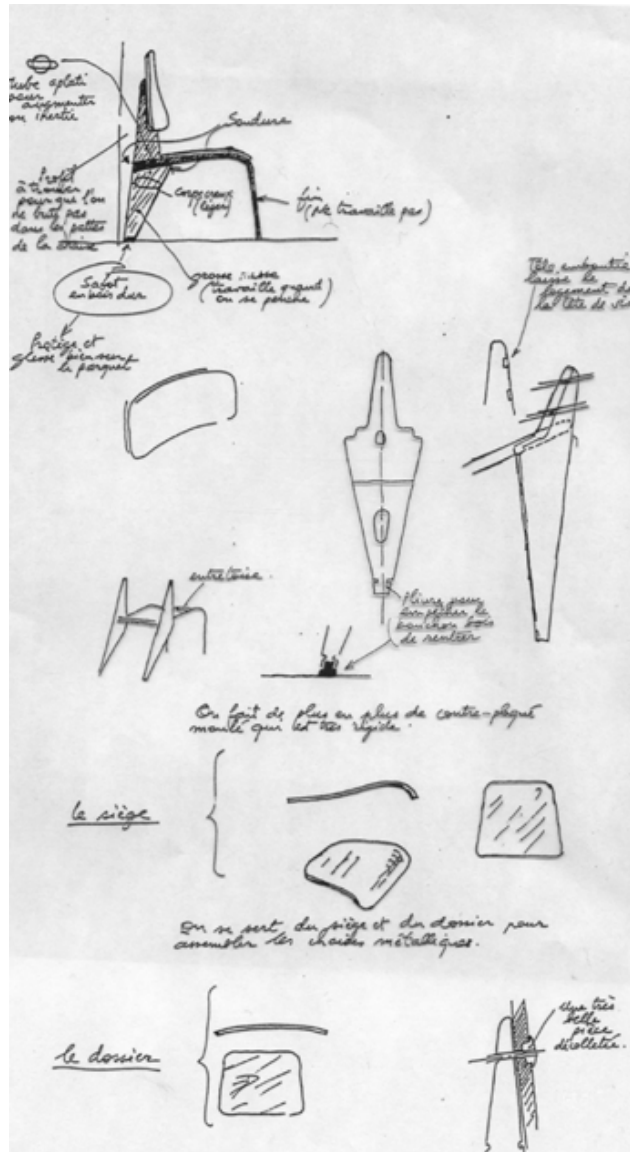
furniture

- 'There is no difference between the construction of an item of furniture and that of a house'
- Furniture cannot be made on the drawing board
- Decide on the detail via the prototype
- Extensive production
- Stopped designing furniture in 1950





Maxeville working methods



PANNEAU-FAÇADE.

Façonnage de la tôle.

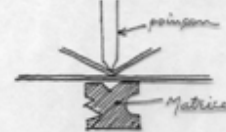
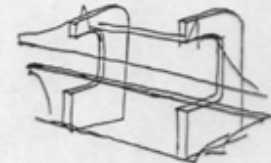
Pliage du métal

Le 19 janvier 62
Nous allons parler un peu plus
mieux.
Celui du métal
c'est celui que je connais le mieux
c'est plus facile

Plissee

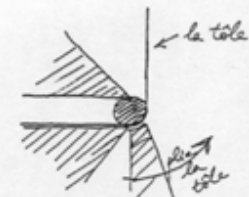


la presse siccuse
ne donne pas
d'arrondis convenables



1^{re} pli *Nécessité d'une grande*
habileté de l'ouvrier
2^{ème} pli *← Serontide de la machine*
il faut que la poison
puisse passer

la plicure ordinaire

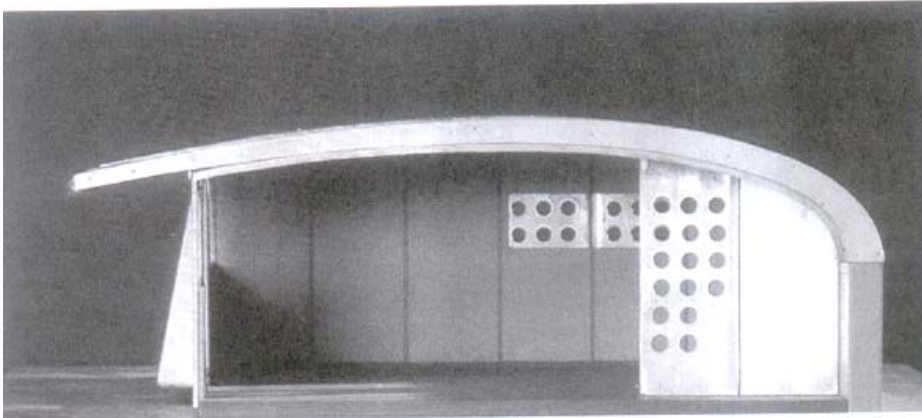
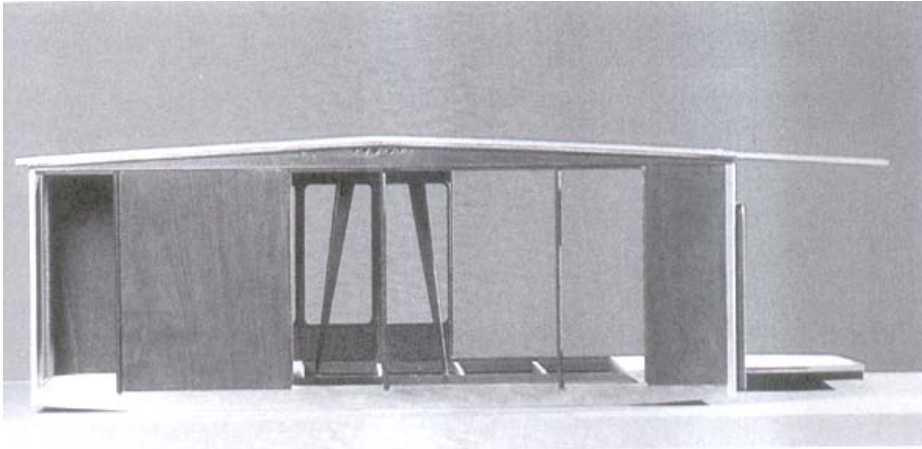


Meudon Houses

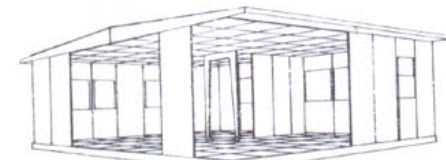
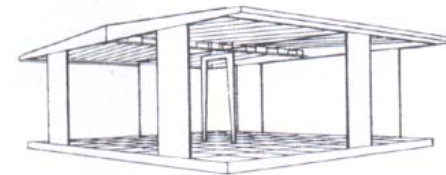
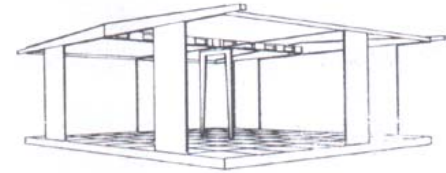
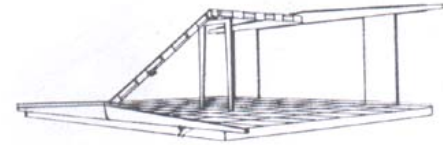
- Competition for sectional buildings for military airfields
- Idea revived after the war to house the homeless in rural areas
- 1200 houses 6 by 6 metres in plan were planned by French Ministry of Construction
- Each house delivered by a single truck and assembled in one day by four men
- All components light and handled by one man
- Cladding interchangeable on the facades, solid, window, translucent
- 25 houses built but delivery instructions from Ministry never come
- Some houses placed in Meudon Park.
- 'I am certain, despite a generally accepted preconception, that the masses instinctively recognise what is beautiful; moreover they are capable of analysing their reactions'
- Cladding interchangeable with solid, window, door or aluminium panels
- Not traditional

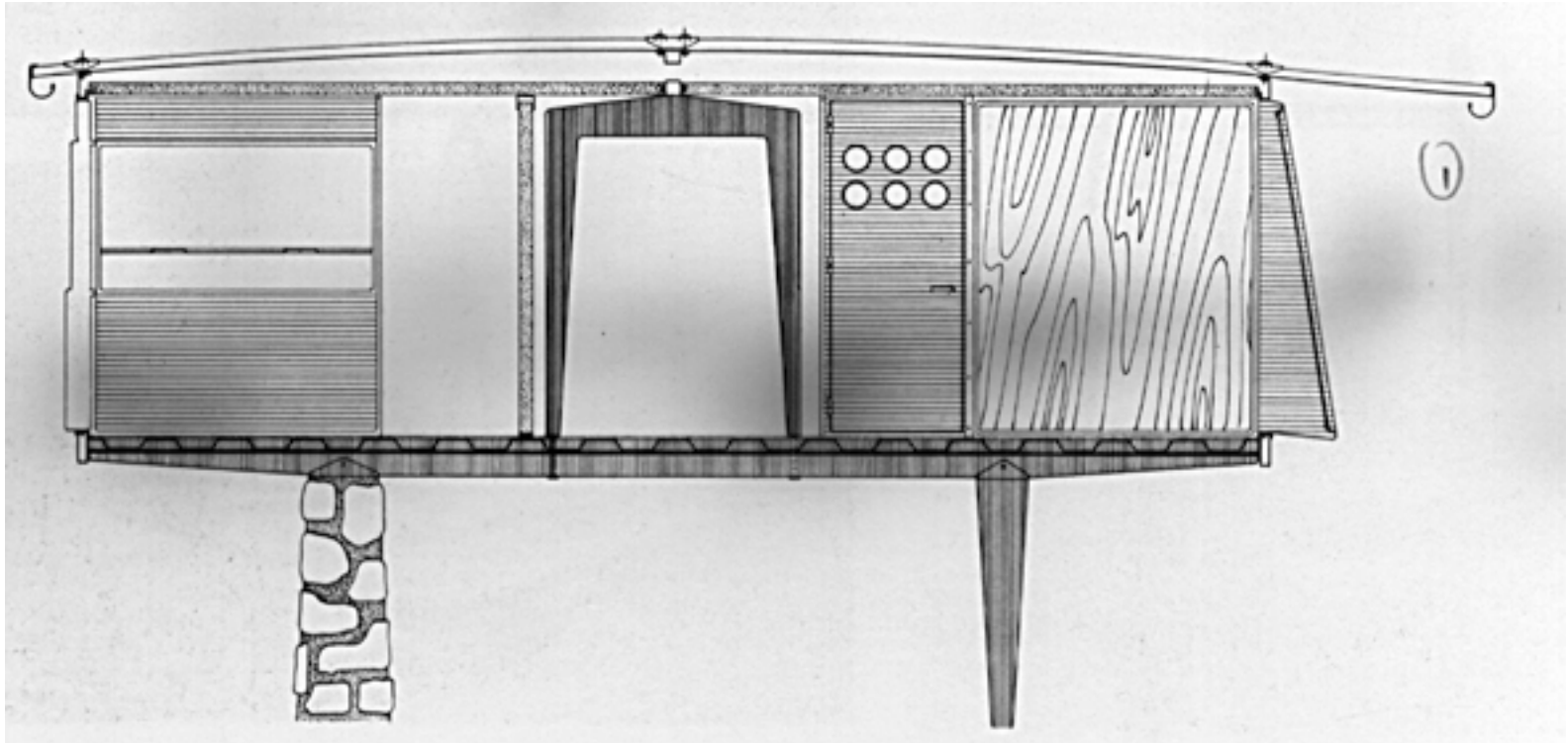
Meudon Houses 1949



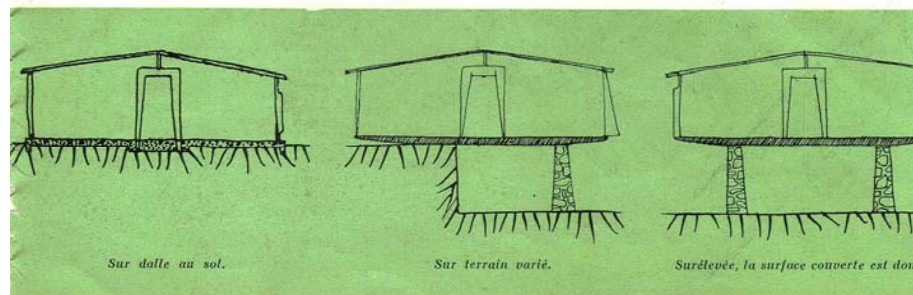
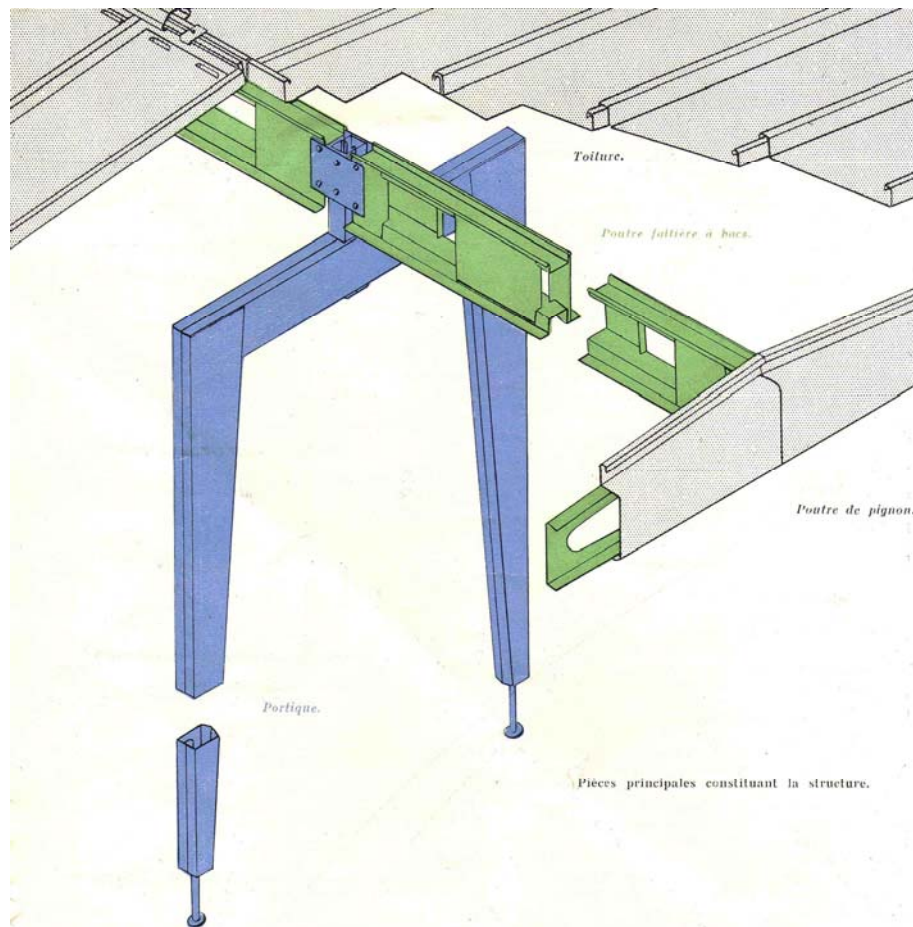


Meudon House - assembly

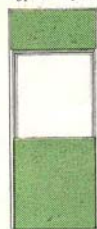




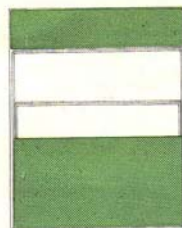
Meudon house -schematic



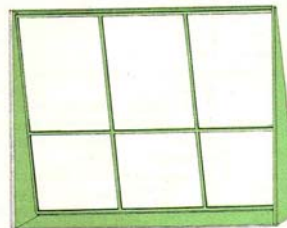
Types de panneaux de façades :



Panneaux-fenêtres



Double module



Panneaux de verre



Plein normal



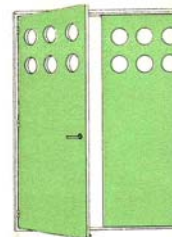
Panneaux à hublots



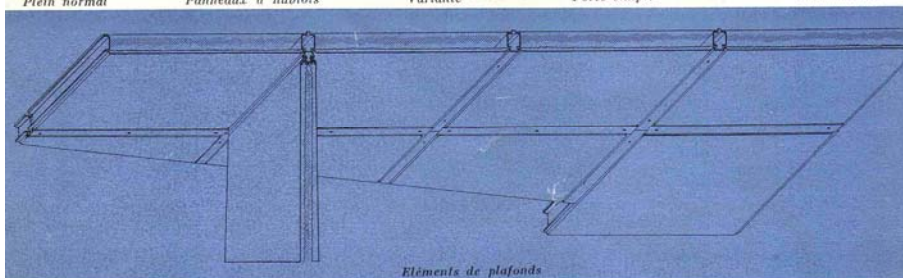
Variante



Porte simple



Porte double



Eléments de plafonds

Types de panneaux de cloisonnement intérieur :



Porte



Panneau plein : métal
ou bois verni



Cloisons à hublots

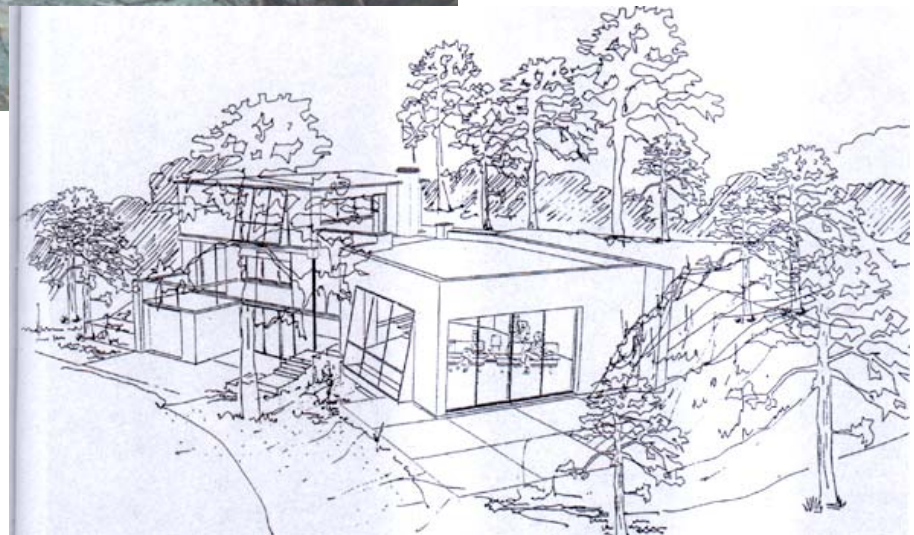


Porte double
bois ou métal

Meudon Houses 1949



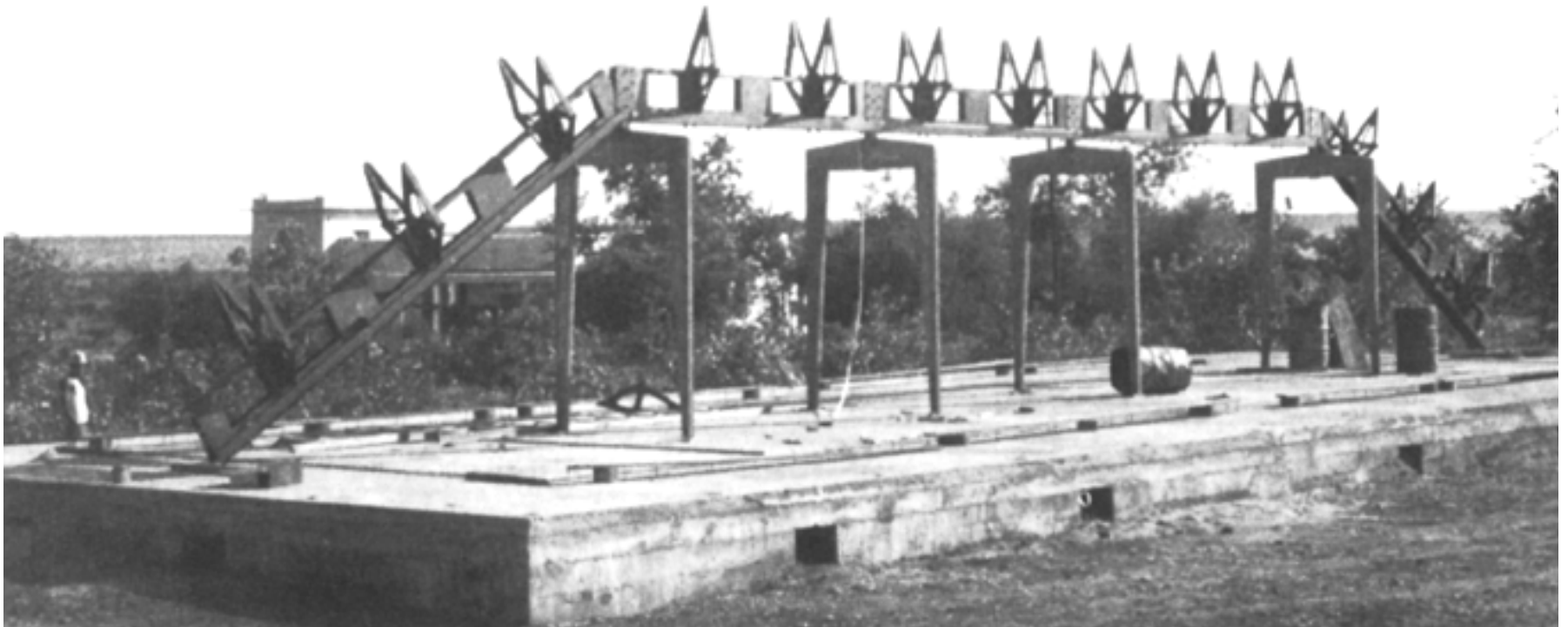
2003





Tropical Buildings

- 1949 transportable aluminium and steel buildings for tropical climates
- Housing transported by plane
- Designed to allow for natural ventilation and cooling
- Simple assembly
- Layered construction
- Adjustable louvres

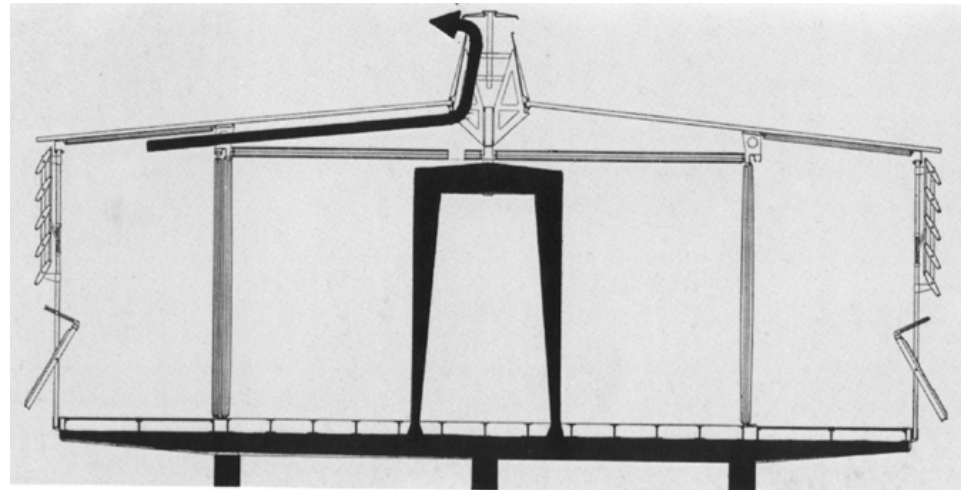
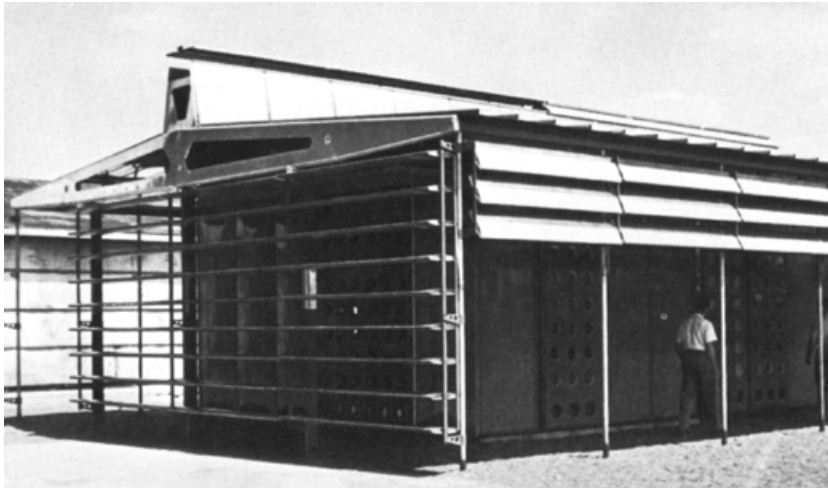


Tropical house - assembly



Tropical house today

Sahara building 1958



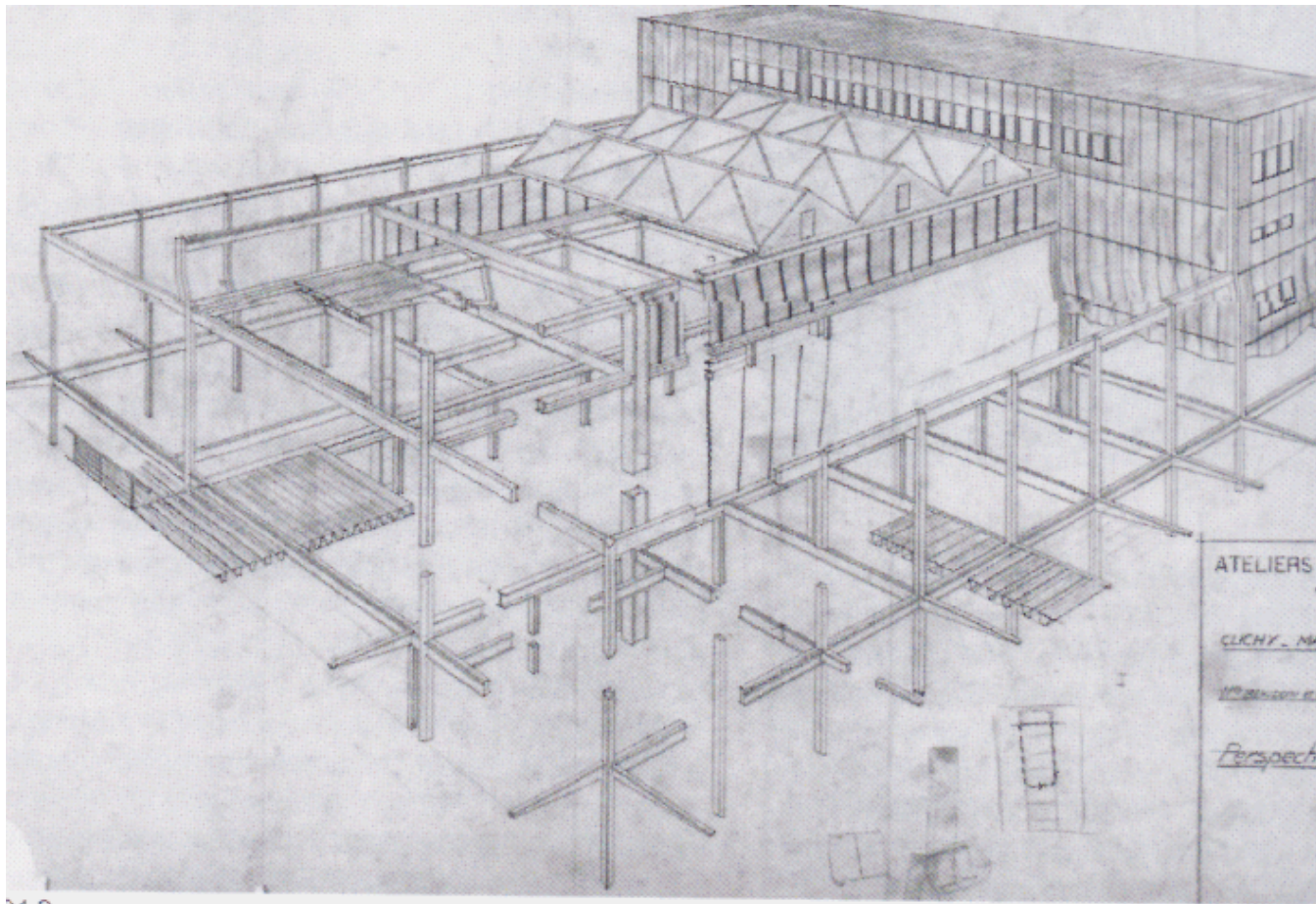
QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Currently at the Tate modern

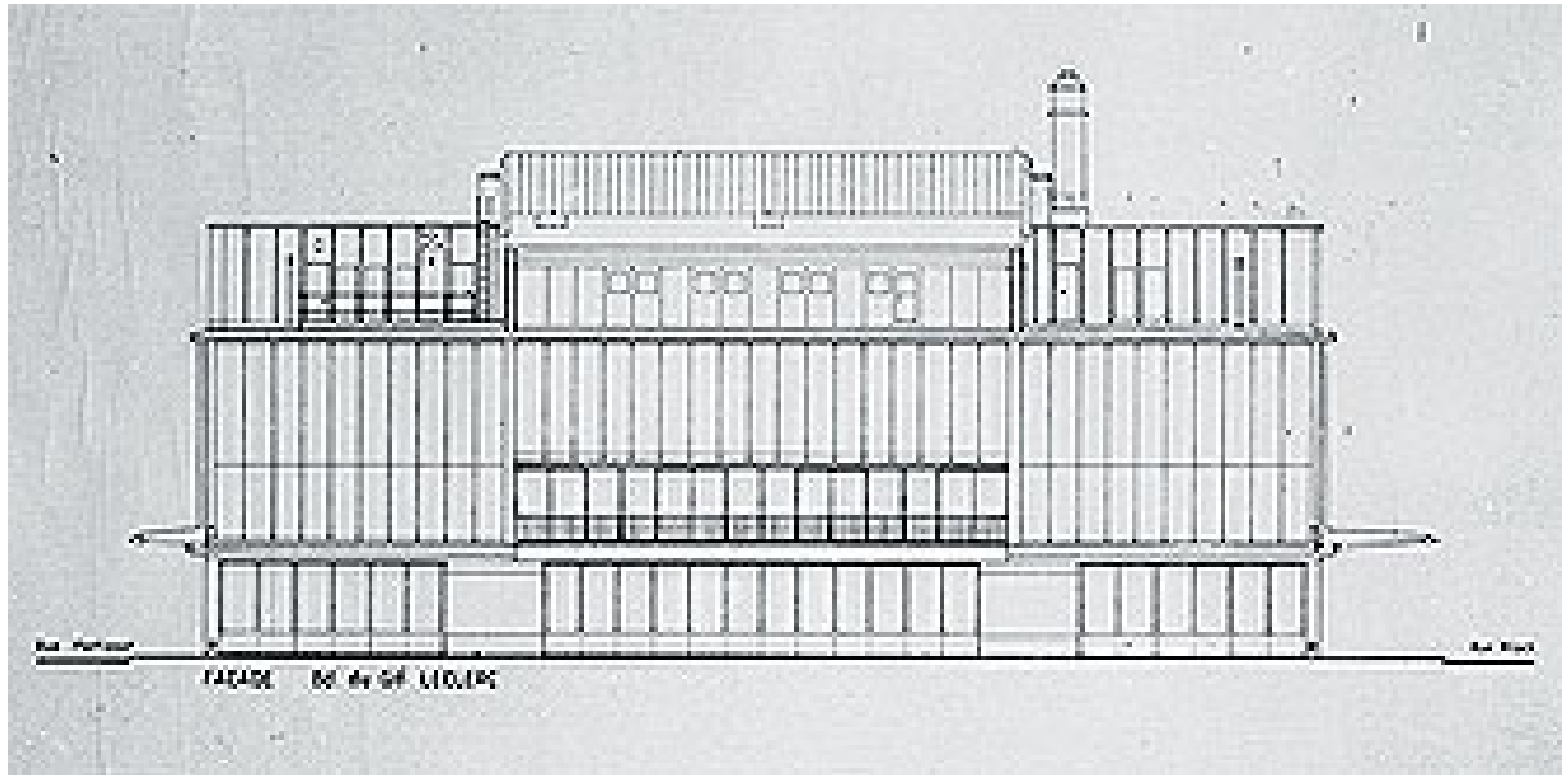
Currently at the TATE modern

Maison du Peuple

- 1938 Clichy District of Paris
- In collaboration with architects Beaudoin and Lods
- Civic and cultural centre
- Market
- Auditorium for 2000 people
- Cinema 500
- Flexible, adaptable space,
- 1st floor moves, roof opens, removable partition
- Cladding
 - Glass and metal facades
 - Spring loaded panels
 - Uses maximum metal sheet size 1.2 by 4.0 metres
- Listed as historic monument in 1983



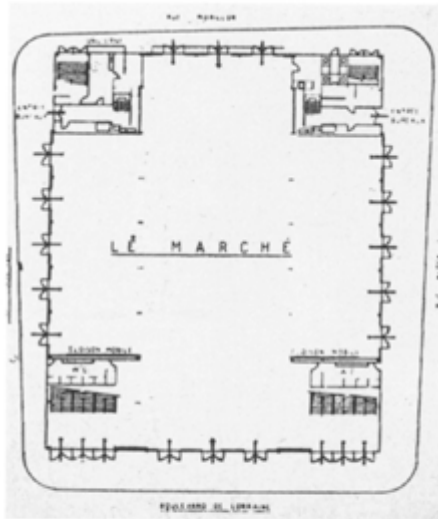
Maison du Peuple - schematic



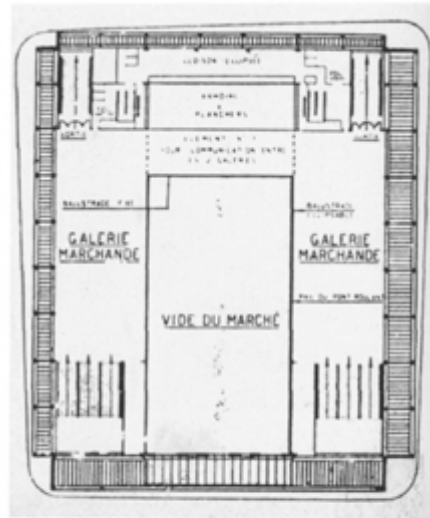
Maison du Peuple

Maison du Peuple

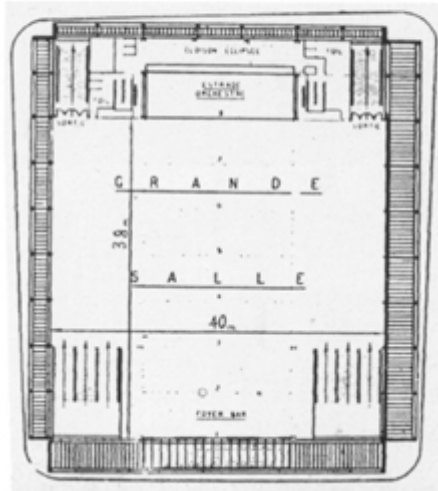
Organisation of floor



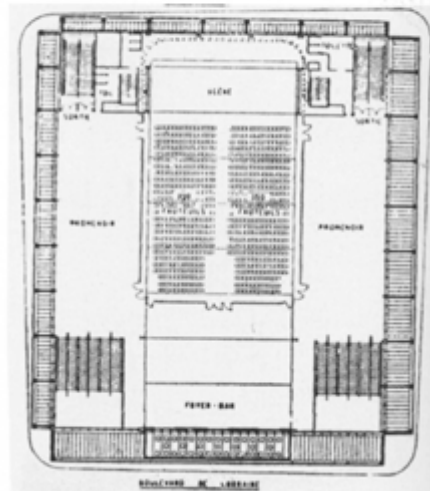
704,3a



704,3b



704,3c



704,3d



Maison du Peuple Roof



12

Maison du Peuple roof opening



Maison du Peuple - movable floors

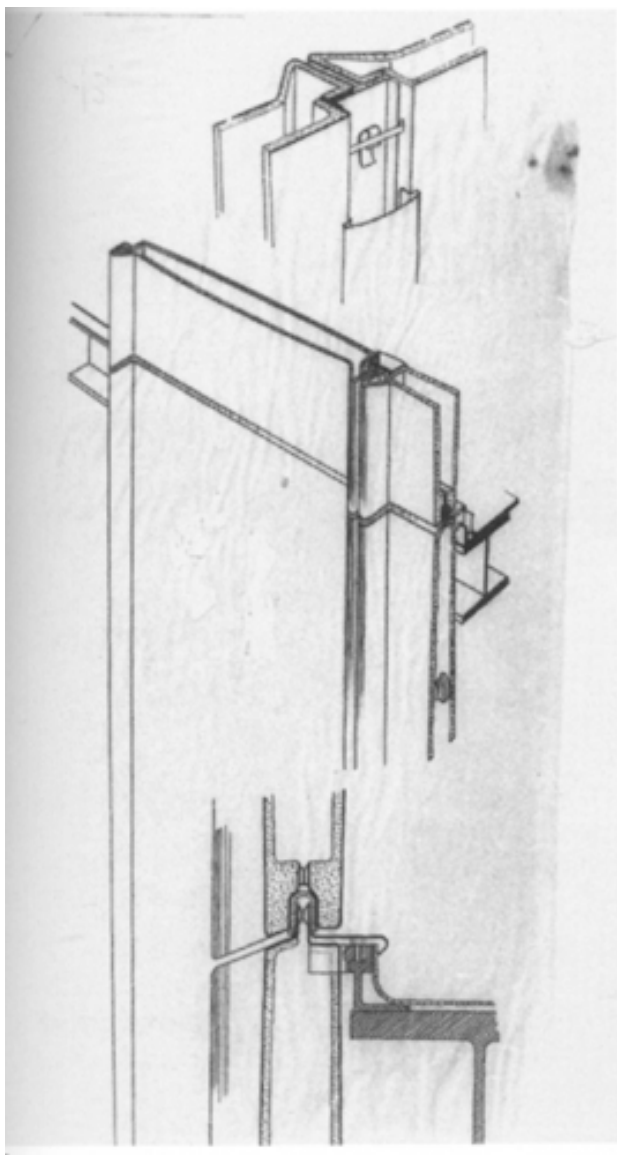


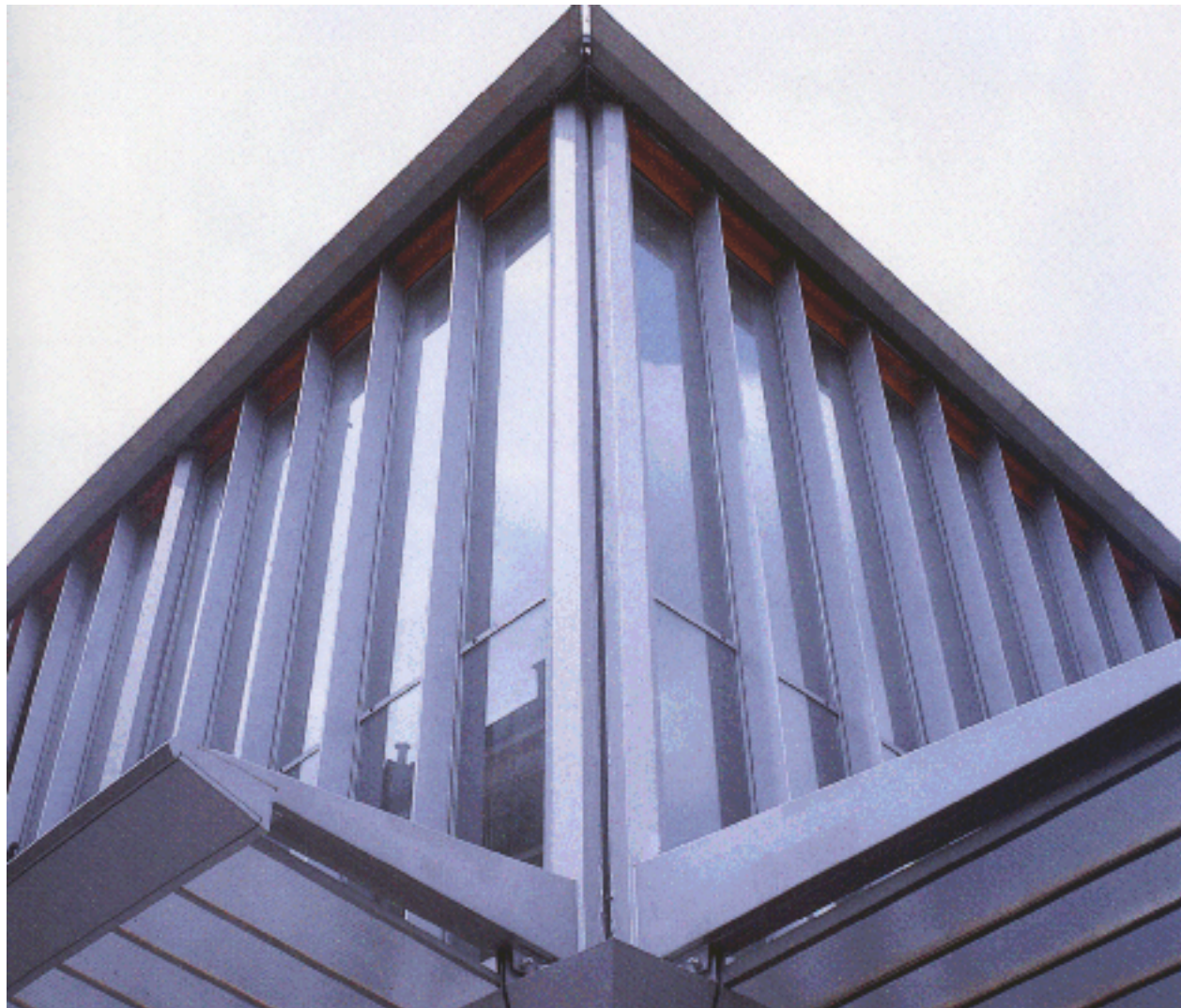


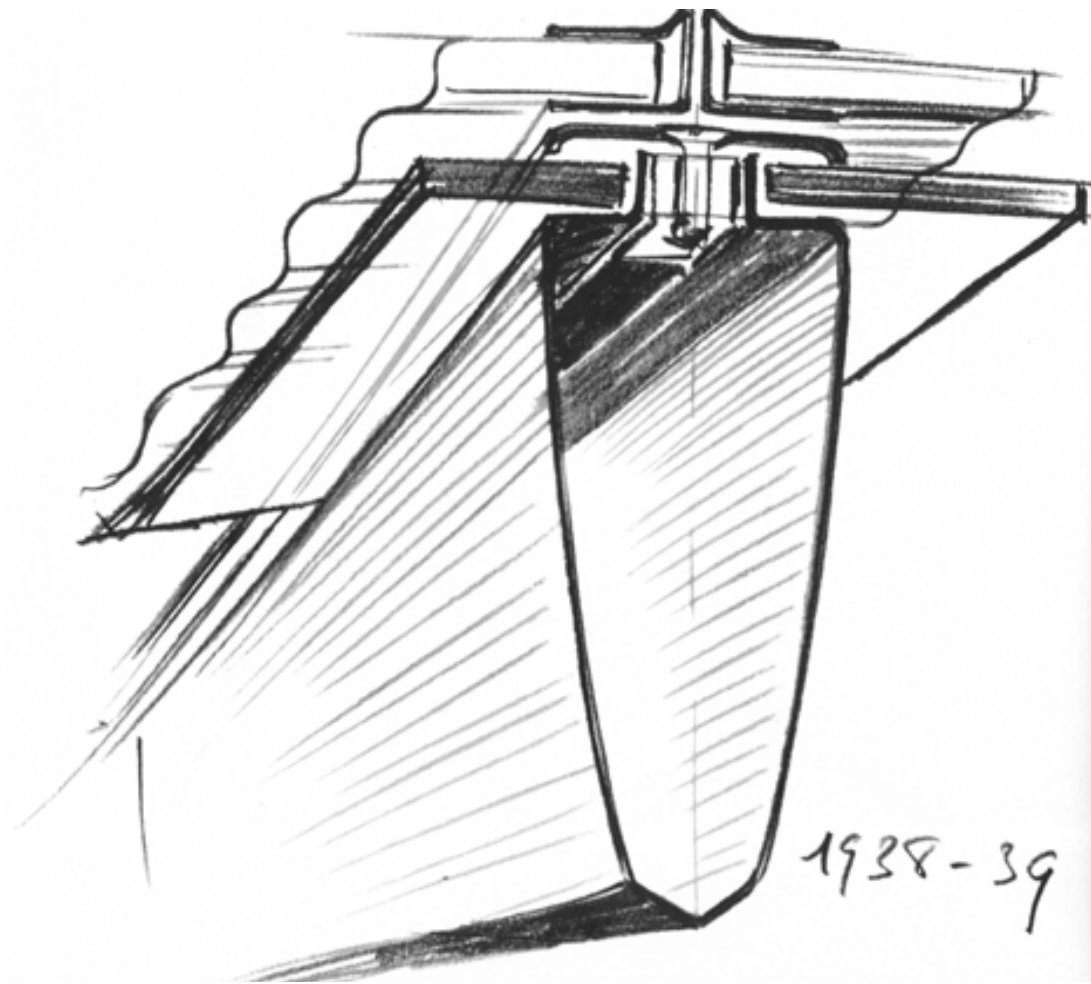


Maison du Peuple
renovated facade

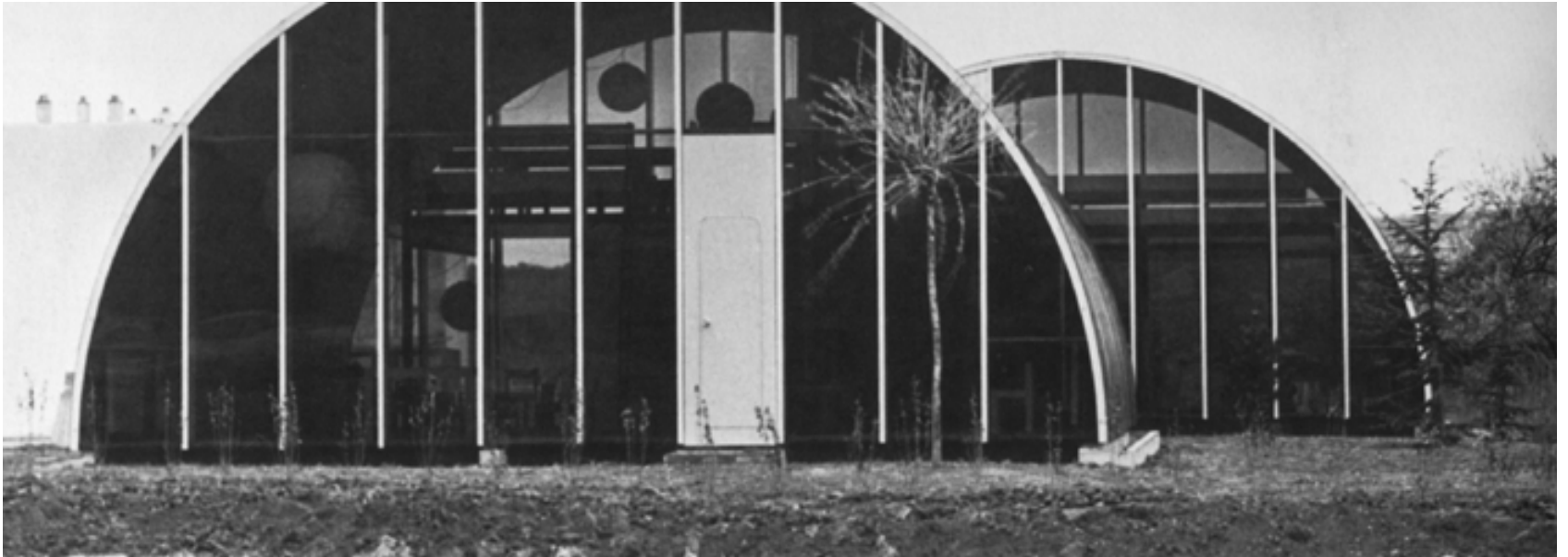
Clicking "Add
TIF" compressed documents
are needed to see the picture.





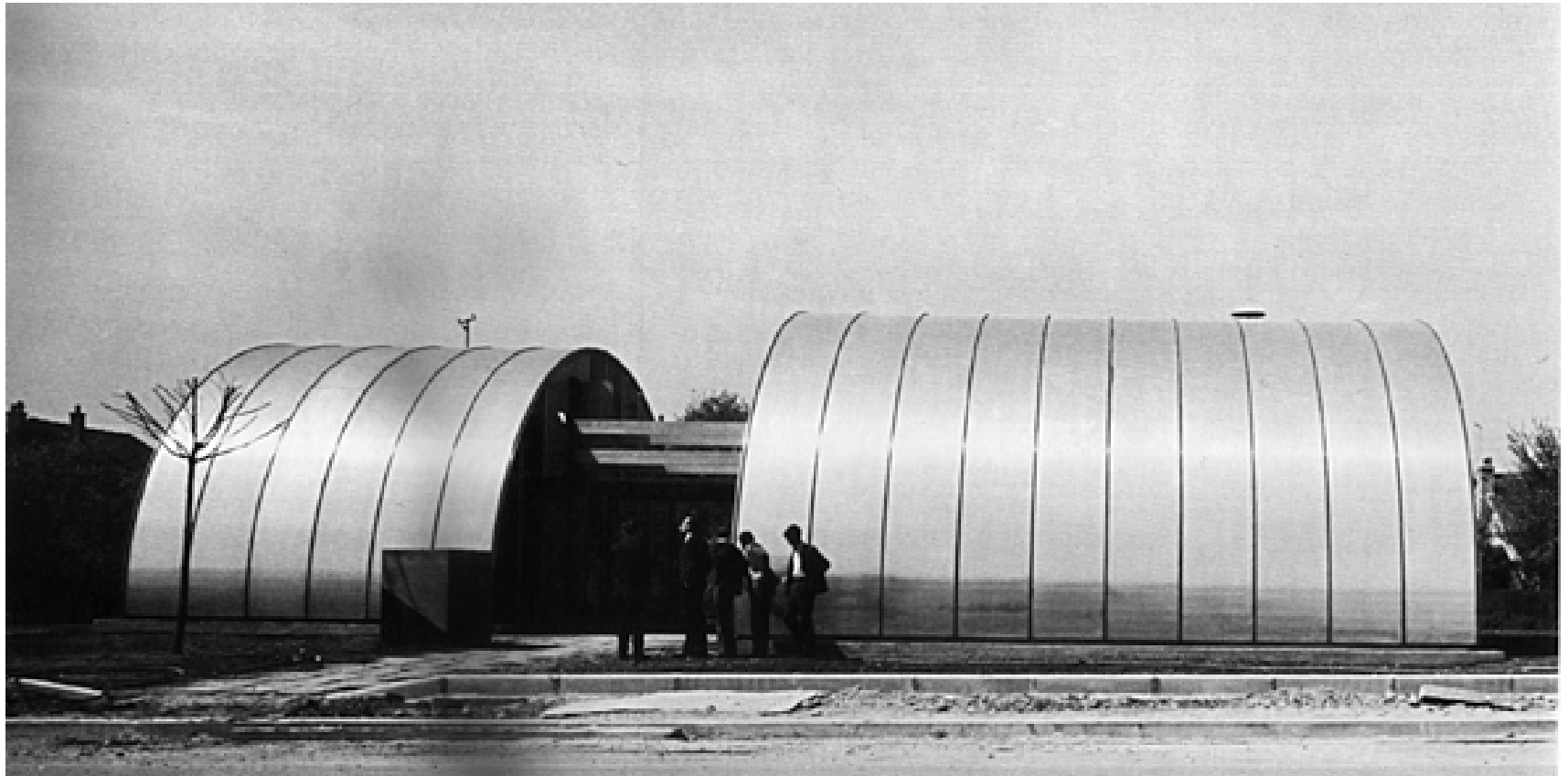


Youth centre 1966



Youth Centre

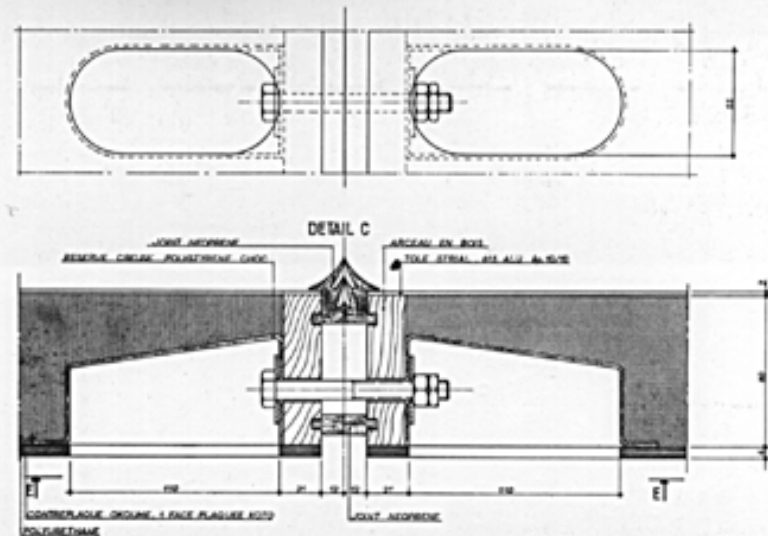
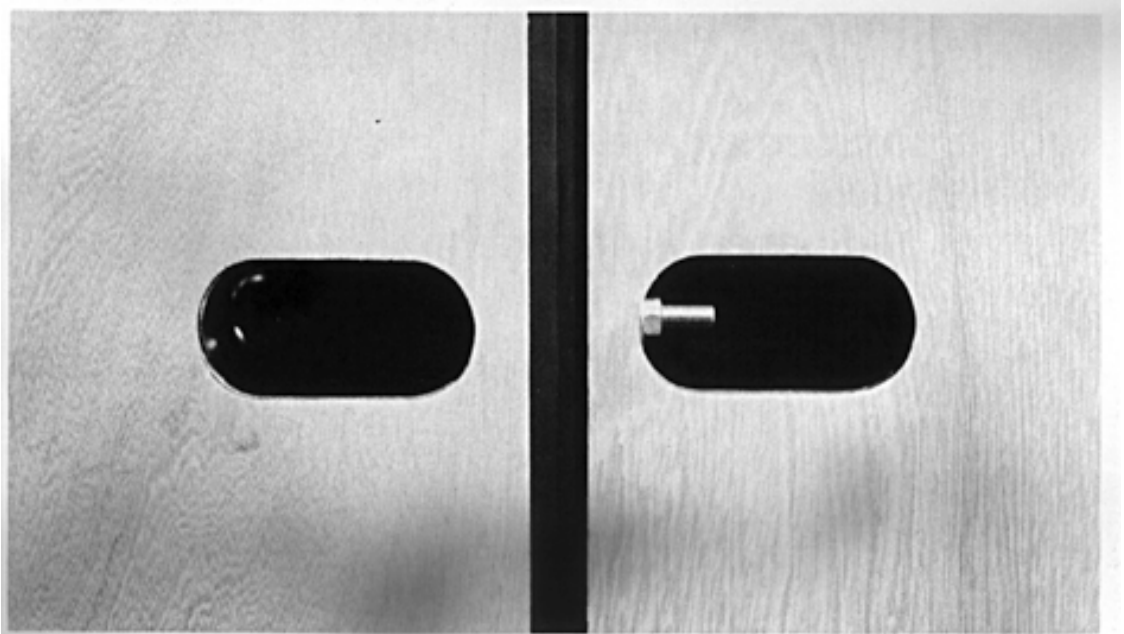
- Paris 1966
- Competition
- Building to be assembled by club
- Aluminium and plywood sandwich construction with foam insulation core
- Simple connections



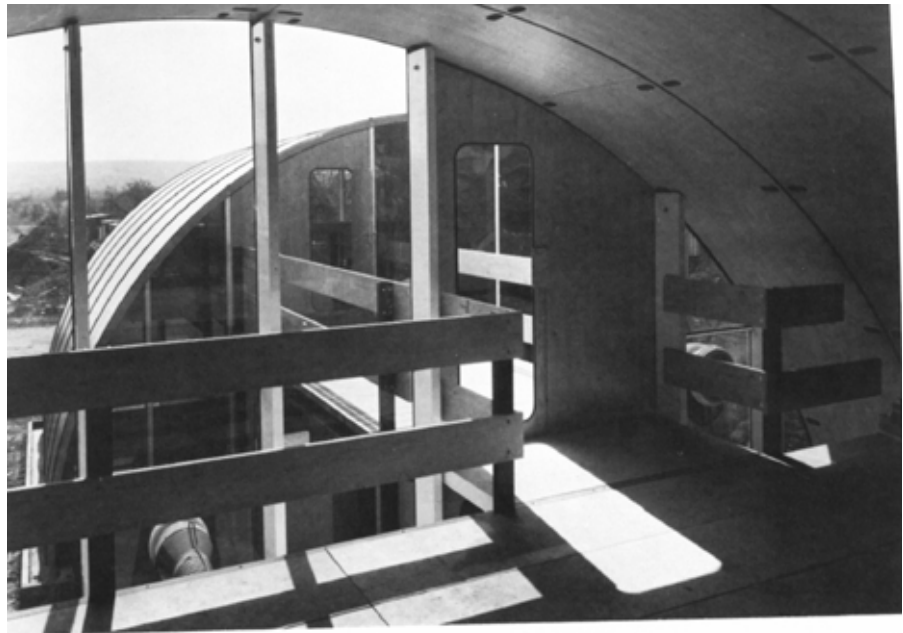
Youth Centre

Youth Centre

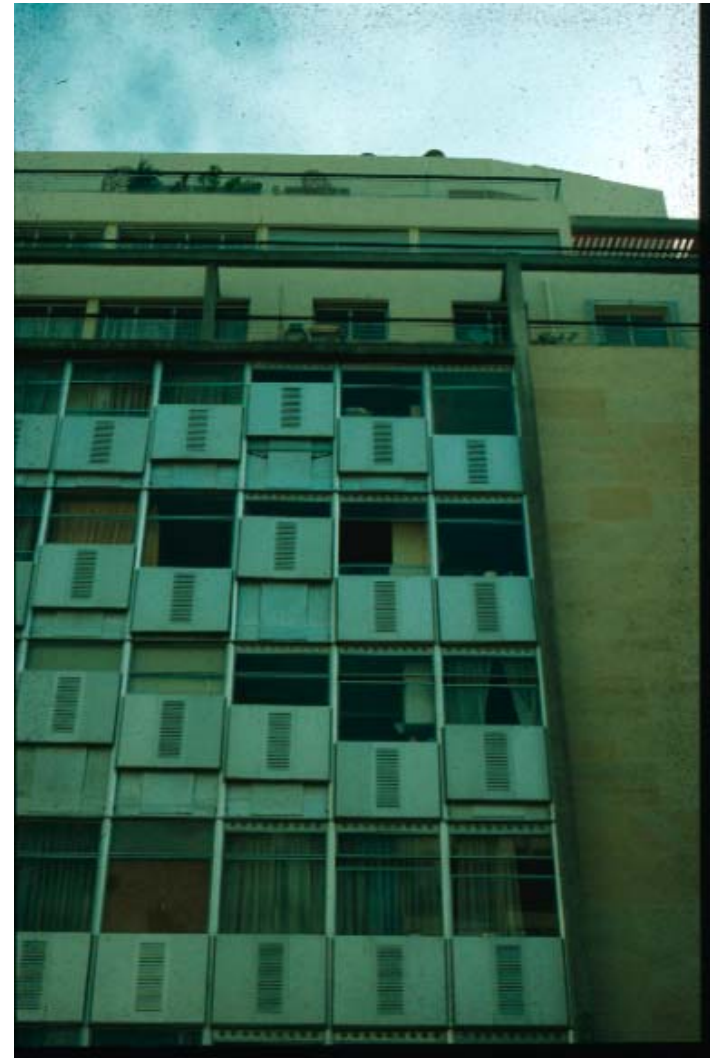
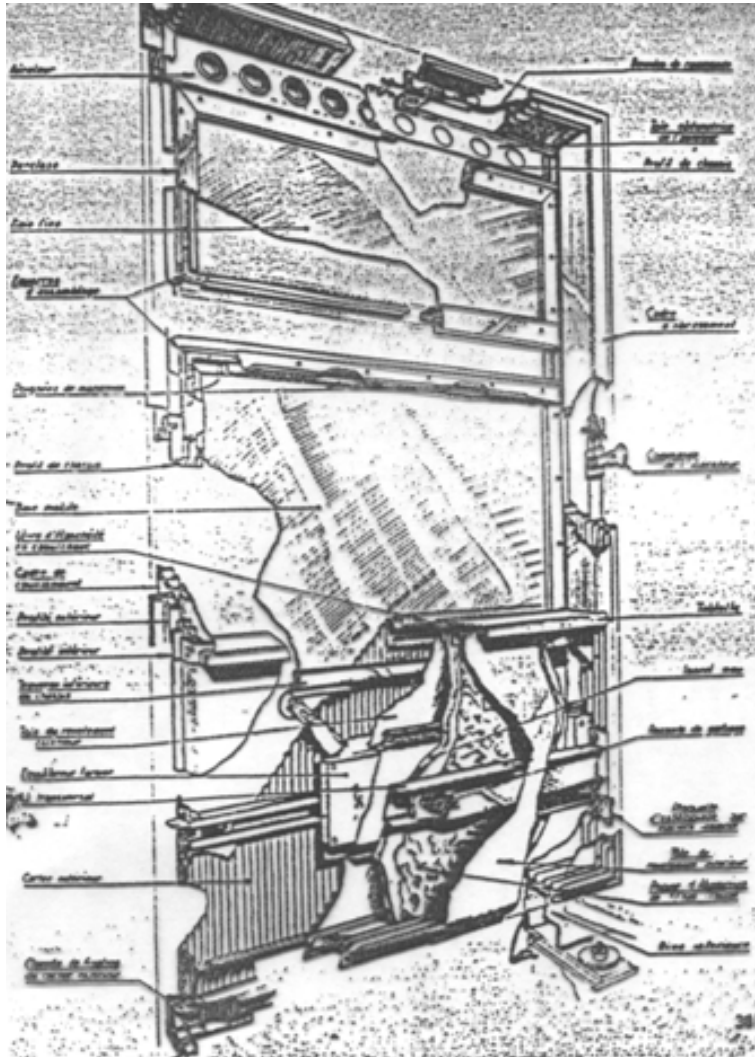
Connection details



Youth centre 1966



Mozart Place 1953



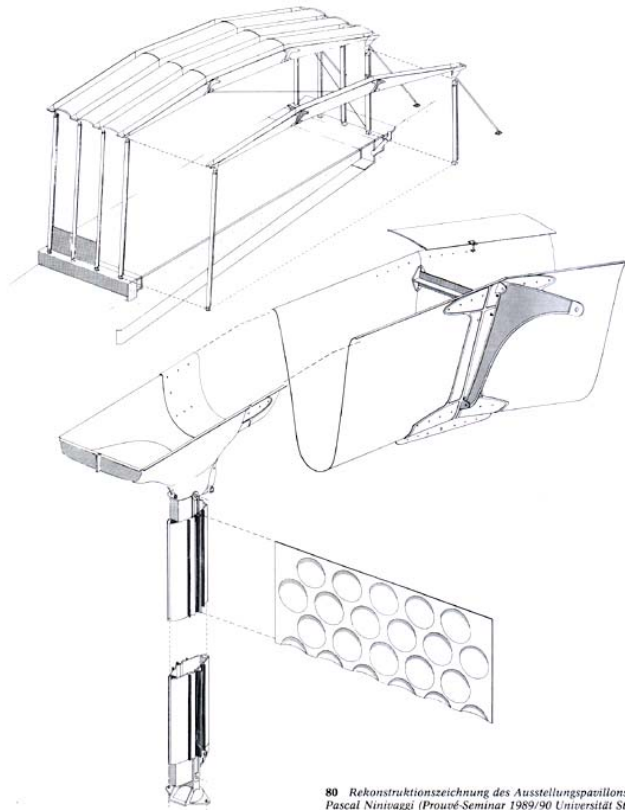
Aluminium Pavilion

1952 Built to
commemorate
centenary of aluminium

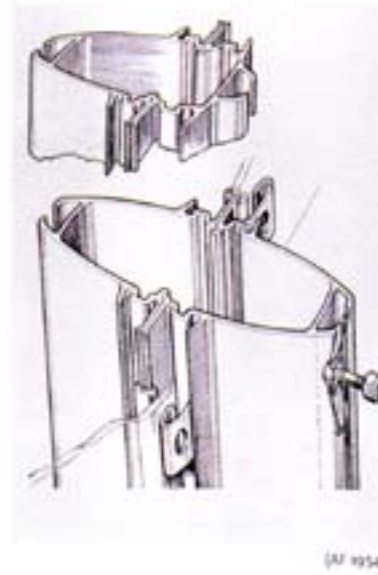
Originally on bank of
Seine, Paris, now at Parc
Des Expositions Paris

Totally integrated structure
and cladding etc.





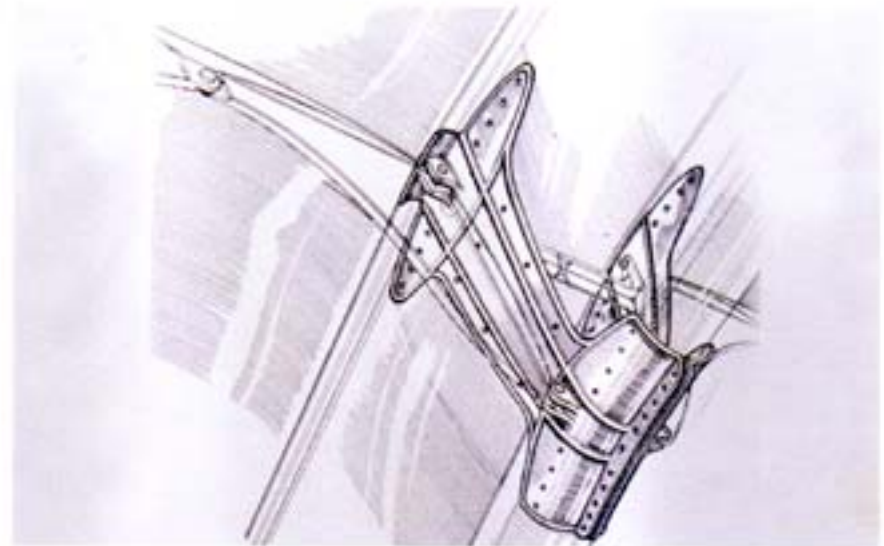
80 Rekonstruktionszeichnung des Ausstellungspavillons von
 Pascal Niniuaggi (Prouvé-Seminar 1989/90 Universität Stuttgart)



(Af 1954)



(Af 1954)



(Af 1954)

Aluminium Pavilion



Prouvé

- Believed in industry-technology
- Enlightened employer
- Innovator in metal, facades, buildings
- Did not believe in component (catalogue) architecture
- Rejected uniformity - not an inherent consequence of industrialised construction
- Influenced many architects (Foster Grimshaw etc)